

Snow & Ice Control

CA20N
DT
-2066

3 1761 11969592 2



on Ontario's
Highways



Stay well
back to help
snowplows
do their job.

Adjusting to Winter Conditions

Ontario winters are challenging for motorists, as well as for Ministry of Transportation staff and contractors responsible for snow and ice control on our provincial highways.

Road user safety is a top priority of the Ministry of Transportation and every effort is made to promote safe highways and to provide an efficient winter maintenance service to the public.

However, weather conditions can be variable and unpredictable, placing extra demands on your vehicle and your driving skills. Take the time to ensure you are well prepared for winter roads and always adjust your speed to existing conditions.

Making Room for the Plows

To do the job right, snowplows and salt and sand trucks must travel more slowly than regular traffic. Sight lines and visibility near a working snowplow are severely restricted by blowing snow and passing can be dangerous. When you see the flashing blue lights of these vehicles, remain at a safe distance.



Echelon Plowing

is the practice of staggered snow plows operating across all lanes of a roadway. Though sometimes annoying to drivers, it is often the safest and most efficient snow removal method for multi-lane highways. Plowing in echelon clears all lanes at once by passing a ridge of snow from one plow to the next. It is extremely dangerous to pass either between or around these snowplows because of whiteout conditions and the ridge of snow being passed between plows.



DID YOU KNOW . . .

For effective operations, snow plows and salt or sand spreaders must travel at speeds considerably slower than the maximum speeds posted for highways. Please be patient and stay well back while snow and ice control crews are at work.



Sand & salt
play a big
role in safe
roads.

Melting Snow and Ice

Road salt is among the most effective snow and ice control materials available for winter road safety. Timely application of salt will prevent snow and ice from bonding to the road surface. For this reason, salt is often spread early in a storm to prevent snow buildup and to aid in snow removal operations.

Road salt, assisted by sun, traffic and warmer daytime temperatures, is also used as a melting agent to eliminate icy or snow packed conditions. You may notice that salt is often applied in a narrow strip along the centre or high point of the highway. This provides a salt-water mixture which flows across the roadway, ensuring the most efficient and effective use of the material.

The Ministry of Transportation employs and recognizes the importance of best salt management practices. The ministry will continue to investigate ways to control and reduce salt usage while ensuring highway safety.



Providing Traction

Sand is useful as an abrasive to provide traction on slippery surfaces. Unlike salt, it does not melt snow and ice.

Sand is used most often when temperatures are too low for salt to be effective. Sand is also used at higher temperatures if traction is required immediately, particularly on hills, curves, bridge decks, shaded areas, intersections, and on snow packed roads. Extra caution should be exercised when driving in these road conditions.

Salt

-12° C.

Sand

DID YOU KNOW . . .

The effectiveness of road salt is greatly reduced when temperatures fall lower than -12° C. This is why bare pavement is hard to achieve below -12° C.



Ministry
uses best
practices.

Snow & Ice Control Standards

Ontario's snow and ice control standards are consistent with the best practices used across North America. Traffic volumes and road function determine how quickly highways are serviced.

A severe or long storm may delay restoration to normal conditions, even with the best efforts of crews.

For provincial highways, bare pavement is to be achieved within a specified time after a storm has ended; eight hours in the case of freeways and other heavily traveled roads. Bare pavement on other sections of the Trans-Canada is to be reached within 16 hours. On lower volume roads, achieving bare pavement may take 24 hours or more, while in other cases, roads are maintained in snow packed conditions throughout the winter.

Plowing commences promptly after a storm begins and priority is given to the main lanes on highways. It may take up to eight hours for plows or sanders to reach all ramps and low volume roads.

On roads with the lowest volumes or gravel surfaces, sand is used to maintain traction on snow packed conditions.

Technological Improvements

The Ministry of Transportation is continually working on improvements in snow and ice control operations and on safe ways to reduce salt usage. Some technologies currently under investigation are:

- De-icing liquids are added to road salt to make it work more quickly than dry salt to melt ice and snow. "Pre-wetted" salt also tends to stay on the road better and works at lower temperatures than dry salt alone.
- Integrated road weather information systems help staff and contractors make the best and most timely decisions on how to deal with winter conditions.
- Advances in salt and sand spreading equipment.

Contracting of Snow & Ice Control Services

The Ministry of Transportation contracts its snow and ice control services, but sets the standards used by contractors and monitors operations before, during and after winter storms. Contractors are closely scrutinized for compliance to standards and penalties for failure are severe, including loss of contract.

DID YOU KNOW . . .

The Police have the authority to close highways. Sometimes the safest and best action is to close a highway until weather conditions improve enough to allow snow control operations to be carried out.





Check
conditions
and exercise
caution.

Changing Road Conditions

Maintenance crews monitor weather and road conditions, day and night, seven days a week throughout the winter. Crew reports are updated four times daily, or more often as closures occur and as road conditions change. Despite the best efforts of snow and ice control crews, extreme weather may prevent the roads from being restored quickly.

Road Closures

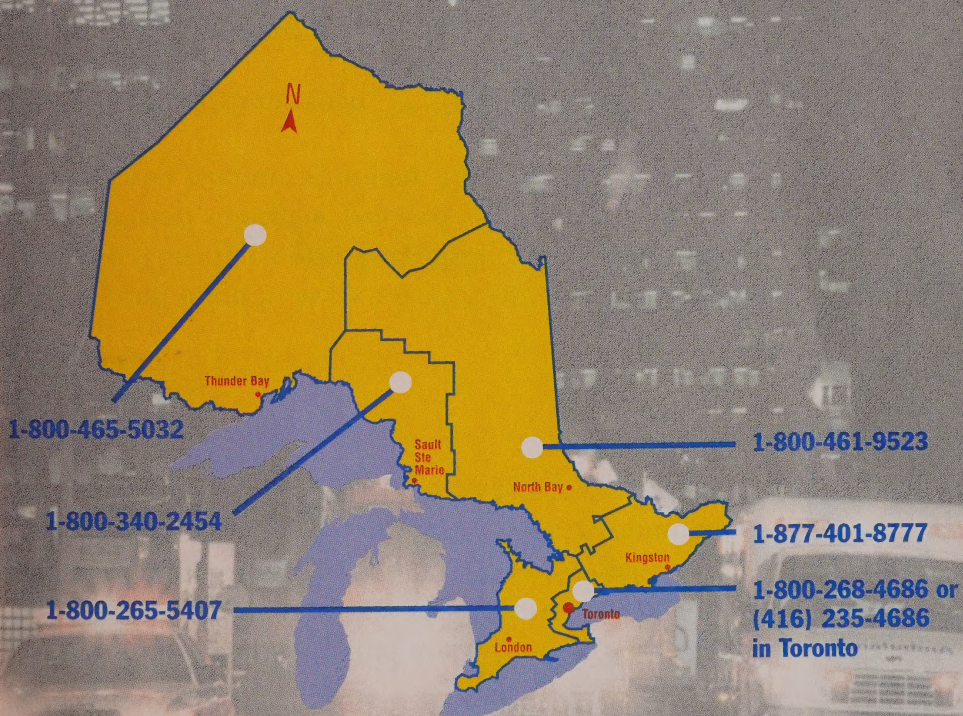
Extreme weather may result in the closing of roads. **Respect road closures and do not attempt to drive on these roads until re-opened.** Always obey emergency road closing signs/barriers and follow the directions of any police officer. It's for your safety. Remember, it is against the law to drive on a closed highway.

Emergency Vehicles

Every day, police, fire, ambulance and other emergency vehicles respond to urgent calls. Precious time lost getting to their destination could mean the difference between life and death. Seconds can save a life. Take lights and sirens seriously. Clear the way. Pull to the right and stop. It's the law.

Road Ready and Weather Wise

- Listen to the radio for road and weather updates and check conditions before leaving.
- Plan extra time to get to your destination and consider delaying your trip in bad weather.
- Always exercise caution and drive according to conditions.
- Watch for the flashing blue lights of snow control vehicles. When approaching them from behind, slow down, stay back and please be patient. Do not pass around them or between them.
- Use the winter driving safety tips on the flip side of this booklet.



CALL FOR REGIONAL ROAD CONDITIONS
OR BY INTERNET: <http://www.mto.gov.on.ca/english/traveller/conditions/index.html>

survival kit for warmth and nourishment. If you have passengers, make sure they're comfortable. In blizzard conditions, especially overnight, make sure one person stays awake as help could take some time to arrive. Maintain circulation by moving your feet, hands and arms.

Winter Driving Survival Kit

It's a good thing to keep a winter survival kit in your vehicle. Having essential supplies can provide some comfort and safety for you and your passengers should you become stranded. Recommended items:

- Ice scraper/snowbrush
- Small tool kit
- Extra clothing and footwear
- Blanket
- Non-perishable energy foods – e.g. chocolate or granola bars, juice, instant coffee, tea, soup, bottled water
- Candle and a small tin
- First aid kit
- Fire extinguisher
- Tow rope or chain
- Booster cables
- Road flares or warning lights
- Gas line antifreeze
- Flashlight and batteries

DID YOU KNOW . . .

Alcohol is not a good survival item and should never be part of your survival kit. And remember: never drink and drive!

The Unexpected

If you get stuck or stranded, don't panic. Stay with your vehicle for safety and warmth. Wait for help to arrive. If you are in an area with cell phone service and have a cell phone, call for help. Remember, dialing *OPP will connect you to the nearest Ontario Provincial Police communications centre. Be careful if you have to get out of your vehicle when on the shoulder of a busy road. If possible, use the door away from traffic. If you attempt to free your vehicle from the snow, be careful, shovel slowly and do not overexert yourself. Do not attempt to shovel or push your vehicle if you have a medical condition. Body heat is retained when clothing is kept dry. Wet clothing, due to the weather or perspiration, can lead to a dangerous loss of body heat.

Draw attention to your vehicle. Use emergency flashers, flares, or a Call Police sign. Run your motor sparingly. Be careful of exhaust fumes. For fresh air, slightly open a window away from the wind. You may have to exit your vehicle occasionally to make sure the exhaust pipe is clear of drifting snow before running the engine. Remember to use the items in your winter

Know what
to do if it
happens
to you.



Snowy Roads

Snow on a road may be hard-packed and slippery as ice. It can also be rutted, full of hard tracks and gullies. Or, it can be smooth and soft. Wet snow can make for slushy roads. Heavy slush can build up in the wheel wells of your vehicle, and can affect your ability to steer. Remember, look ahead and adjust your driving to the road and weather conditions. Slow down, avoid sudden turns of the steering wheel, sudden braking and accelerating that could cause a skid.

Ice

On icy roads, be careful when approaching shaded areas, bridges and overpasses as these sections of road freeze much sooner in cold weather and stay frozen long after the sun has risen. Watch out for black ice, areas of the road that appear black and shiny and where your vehicle can lose traction suddenly. Slow down, and be ready to shift to neutral or step on the clutch as your vehicle crosses these areas.

TAKE TIME... to ensure you are prepared to handle winter road conditions. Consider an advanced driver-training course that teaches emergency driving skills.

Stay alert,
slow down,
and stay in
control.



On The Road

Visibility

It's critical for drivers to see and be seen in low light conditions and when blowing snow and white-outs impair your visibility. Turn on your vehicle's full lighting system.

Spacing

It takes longer to stop on a slippery road. It's important to leave plenty of space between you and the vehicle ahead. A guide to safe distancing under normal driving conditions is the two-second rule. In winter, and especially during poor weather conditions, double the two-second rule.

Braking

Make sure you know how to use your braking system in all weather and road conditions. Consider taking an advanced driving course that teaches emergency driving skills.

Skidding

In a skid it's important to regain control of your vehicle especially if it skids sideways. To do this, take your foot off the brake, step on the clutch or shift to neutral then look where you want your vehicle to go and steer in that direction.

If you are travelling a long distance, plan your route ahead of time. Let someone know of your destination and expected time of arrival.

Wear comfortable clothing that doesn't restrict your movement while at the wheel. Keep warm clothing for getting out of your vehicle.

Clear snow and ice from all windows, roof, lights and mirrors. After starting your vehicle, wait for the interior of the windows to clear of fog so you will have good visibility all around.

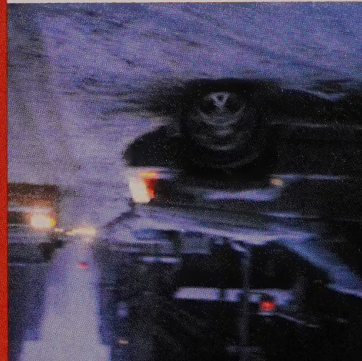
Make sure you travel with at least half a tank of gas.

Make sure you have **sufficient windshield washer fluid** in the reservoir and that it is rated in the -40 C temperature range. Keep an extra jug in the vehicle.

If you are in an area with cell phone service and have a **cell phone**, use it only when necessary. When you need help or are in an emergency, pull well off the road to make or receive a call.

Remember, dialing *OPP will connect you to the nearest Ontario Provincial Police communications centre.

PLAY IT SAFE! Severe winter driving conditions may make you nervous, uncomfortable or fearful. Unless absolutely necessary, stay off the road. Proper preparation and the right skills will help you face the challenge of winter driving.



Plan ahead,
be prepared,
and drive
safely.

Driving and Winter

Stay alert, slow down, and stay in control – the three key elements to safe winter driving. Drive according to current road and weather conditions. Keep a safe distance between you and the vehicle in front of you. Avoid situations where you may have to brake suddenly on a slippery surface.

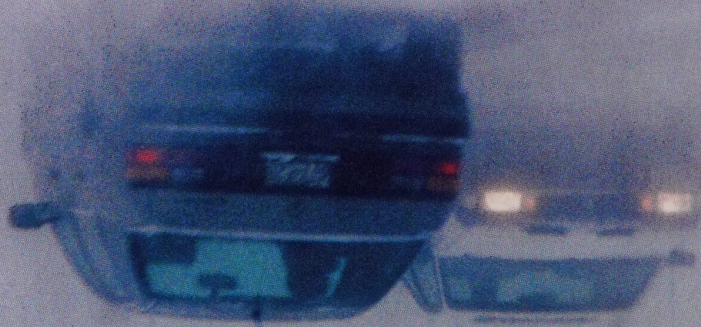
Be Prepared – Driver's Checklist

Get your vehicle winter-ready with a maintenance check-up. Don't wait for winter to set in to have your battery, belt and hoses, radiator, oil, lights, brakes, exhaust system, heater/defroster, wipers and ignition system checked.

Have tires and tire pressure checked. Tire air pressure decreases in colder weather. Depending on where you live and the amount of driving you do, snow tires can provide better traction.

Check weather and travel conditions before heading out. Don't take chances if the weather is bad. Give yourself extra time for travel, or wait until conditions improve. Call the Ministry of Transportation's information number on road conditions listed in your local phone directory.

Winter Driving



Be Prepared,
Be Safe!